

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

+

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Compleat If Known	
				Application Number	
				Filing Date	
				First Named Inventor	Sukant Tripathy
				Group Art Unit	
				Examiner Name	
Sheet	1	of	5	Attorney Docket Number	NA-1219-CIP 2

[illegible][illegible]

Examiner Signature	<i>[Signature]</i>	Date Considered	5/24/5
-----------------------	--------------------	--------------------	--------

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

+

Please type a plus sign (+) inside this box → +

PTO/SB/088 (10-86)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
Sheet	2	of	5	Application Number	
				Filing Date	
				First Named Inventor	Sukant Tripathy
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	NA-1219-CIP 2

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
J	J	Tzou, K. and Gregory, R.V., "A method to prepare soluble polyaniline salt solutions - in situ doping of PANI base with organic dopants in polar solvents," Synthetic Metals, 53:365-377 (1993).	
	K	Nguyen, M.T., et al., "Synthesis and properties of novel water-soluble conducting polyaniline copolymers," Macromolecules, 27:3625-3631 (1994).	
	L	Shannon, K. and Fernandez, J.E., "Preparation and properties of water-soluble, poly(styrenesulfonic acid) -doped polyaniline," J. Chem. Soc., Chem. Comm., 643-644 (1994).	
	M	Tanaka, K., et al., "Doping effect of C60 on soluble polyaniline," Synthetic Metals, 66:193-196 (1994).	
	N	Ferreira, M., et al., "Molecular self-assembly of conjugated polyions: a new process for fabricating multilayer thin film heterostructures," Thin Solid Films, 244:806-809 (1994).	
	O	Ng, S.C., et al., "Poly(o-aminobenzylphosphonic acid): a novel water soluble, self-doped functionalized polyaniline," J. Chem. Soc., Chem. Commun., 1327-1328 (1995).	
	P	Chen, S. and Hwang, G., "Synthesis of water-soluble self-acid-doped polyaniline," J. Am. Chem. Soc., 116:7939-7940 (1994).	
	Q	Chen, S. and Hwang, G., "Water-soluble self-acid-doped conducting polyaniline: structure and properties," J. Am. Chem. Soc., 117:10055- 10062 (1995).	
	R	Chan, H.S.O., et al., "A new water-soluble, self-doping conducting polyaniline from poly(o-aminobenzylphosphonic acid) and its sodium salts: synthesis and characterization," J. Am. Chem. Soc., 117:8517-8523 (1995).	
	S	Dordick, J.S., et al., "Peroxidases depolymerize lignin in organic media but not in water," Proc. Natl. Acad. Sci. USA, 83:6255-6257 (1986).	
	T	Dordick, J.S., et al., "Polymerization of phenols catalyzed by peroxidase in nonaqueous media," Biotechnology and Bioengineering, 30:31-36 (1987).	

Examiner Signature		Date Considered	5/24/95
--------------------	--	-----------------	---------

¹EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450**

Please type a plus sign (+) inside this box → +

PTO/SB/088 (10-85)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
	Application Number				
	Filing Date				
	First Named Inventor	Sukant Tripathy			
	Group Art Unit				
	Examiner Name				
Sheet	3	of 5			
	Attorney Docket Number	NA-1219-CIP 2			

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
✓	U	Kazandjian, R. Z., et al., "Enzymatic analyses in organic solvents," Biotechnology and Bioengineering, 28:417-421 (1986).	
	V	Klibanov, A.M. et al., "Enzymatic removal of toxic phenols and anilines from waste waters," J. Appl. Biochem., 2:414-421 (1980).	
	W	Sakaki, J., et al., "Lipase-catalyzed asymmetric synthesis of 6-(3-chloro-2-hydroxypropyl)-1, 3-dioxin-4-ones and their conversion to chiral 5,6-epoxyhexanoates," Tetrahedron: Asymmetry, 2:343-346 (1991).	
	X	Ikeda, R., et al., "Novel synthetic pathway to a poly (phenylene oxide) . Laccase-catalyzed oxidative polymerization of syringic acid," Macromolecules, 29: 3053-3054 (1996).	
	Y	Akkara, J.A., et al., "Synthesis and characterization of polymers produced by horseradish peroxidase in dioxane," J. Polymer Sci.: Part A: Polymer Chemistry, 29:1561-1574 (1991).	
	Z	Klibanov, A.M. and Morris, E.D., "Horseradish peroxidase for the removal of carcinogenic aromatic amines from water," Enzyme Microb. Technol., 3:119-122 (1981).	
	AA	Ayyagari, M.S., et al., "Controlled free-radical polymerization of phenol derivatives by enzyme-catalyzed reactions in organic solvents," Macromolecules, 28:5192-5197 (1995).	
	AB	Bruno, F.P., et al., "Enzymatic mediated synthesis of conjugated polymers at the Langmuir trough air-water interface," Langmuir, 11:889-892 (1995).	
	AC	Lapkowski, M., "Electrochemical synthesis of linear polyaniline in aqueous solutions," Synthetic Metals, 35:169-182 (1990).	
	AD	March, J., in Advanced Organic Chemistry - Reactions, Mechanisms, and Structure (NY: Magraw-Hill Company), pp.667, 668 (1977).	
✓	AE	Shinohara, H., et al., "Enzyme microsensor for glucose with an electrochemically synthesized enzyme-polyaniline film," Sensors and Actuators, 13:79-86 (1988).	

Examiner Signature		Date Considered	5/24/05
--------------------	--	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450

Please type a plus sign (+) inside this box → +

PTO/SB/088 (10-86)
Approved for use through 10/31/99, OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				C mplete If Known	
Application Number					
Filing Date					
First Named Inventor		Sukant Tripathy			
Group Art Unit					
Examiner Name					
Sheet	4	of	5	Attorney Docket Number NA-1219-CIP 2	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ²	Cita No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
[Signature]	AF	Alva, K.S., et al., "Biochemical synthesis of water soluble polyanilines: poly(p-aminobenzoic acid) ," Macromol. Rapid Comm., 17:859.-863 (1996).	
[Signature]	AG	Liao, Y., and Levon, K., "Solubilization of polyaniline in water by interpolymer complexation," Macromol. Rapid Commun., 16: 393-397 (1995).	
[Signature]	AH	Excerpts from "Plastics Engineering: Plastics - Saving Planet Earth," Volume LIII, Number 3 -(Toronto; March, 1997).	
[Signature]	AI	Westerweele, E., et al., "'Inverted' Polmer Light-Emitting Diodes on Cylindrical Metal Substrates," Advanced Materials, 7(9) :788-790 (1995).	
[Signature]	AJ	Ryu, K., et al., "Peroxidase-Catalyzed Polymerization of Phenols: Kinetics of p-Cresol Oxidation in Organic Media," American Chemical Society Symp. Ser., 389:141-157 (1989).	
[Signature]	AK	Alva, K.S., et al., "Novel Immobilization Techniques in the Fabrication of Efficient Electrochemical Biosensors," SPIE, 2716: 152-163 (1996).	
[Signature]	AL	Genies, E.M., et al., "A rechargeable battery of the type polyaniline/propylene carbonate -LiClO4/Li-Al," Journal of Applied Electrochemistry 18:751-756 (1988).	
[Signature]	AM	Samuelson, L.A., et al., "Biologically Derived Conducting and Water Soluble Polyaniline," Macromolecules 31:4376-4378 (1998).	
[Signature]	AN	Liu, W., et al., "Enzymatically Synthesized Conducting Pollyaniline," J. Am. Chem. Soc. 121:71-78 (1999).	
[Signature]	AO	Zhang, Q.M., et al., "Enzymatic Template Synthesis of Polyphenol," Materials Research Society 600:255-259 (2000).	
[Signature]	AP	Akkara, J.A., et al., "Hematin-Catalyzed Polymerization of Phenol Compounds," Macromolecules 33:2377-2382 (2000).	

Examiner Signature	[Signature]	Date Considered	5/24/05
-----------------------	-------------	--------------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450

Please type a plus sign (+) inside this box → +

PTO/SB/088 (10-95)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Compleat if Kn wn <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Application Number</td><td></td></tr> <tr><td>Filing Date</td><td></td></tr> <tr><td>First Named Inventor</td><td>Sukant Tripathy</td></tr> <tr><td>Group Art Unit</td><td></td></tr> <tr><td>Examiner Name</td><td></td></tr> <tr><td>Attorney Docket Number</td><td>NA-1219-CIP 2</td></tr> </table>		Application Number		Filing Date		First Named Inventor	Sukant Tripathy	Group Art Unit		Examiner Name		Attorney Docket Number	NA-1219-CIP 2
Application Number																
Filing Date																
First Named Inventor	Sukant Tripathy															
Group Art Unit																
Examiner Name																
Attorney Docket Number	NA-1219-CIP 2															
Sheet	5	of	5													

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
AQ		Dordick, J. S., "Enzymatic catalysis in monophasic organic solvents," 1 Eynzyme Microbial Technology 11: 194-211 (1989).	
AR		Dunford, H.B., "Horseradish Peroxidase: Structure and Kinetic ji. Properties," In Peroxidases in Chemistry and Biology Vol. II, J. Everse, et al., eds (FL: CRC Press, Inc.), Pp 2-17 (1991).	
AS		Wudl, F., et al., "Poly(p-phenyleneamineimine): Synthesis and arison to Polyaniline" J. Am. Chern. Soc. 109:3677-3684 (1987).	
AT		Stafström, S., et al., "Polaron Lattice in Highly Conducting Polyaniline: Theoretical and Optical Studies," The American Physical Society 59:1464-1467 (1987).	
AU		Shacklette, L.W., et al., "EMI Shielding of Intrinsically Conductive Polymers," In Search of Excellence by Society of Plastic Engineers and Plastics Engineering 665-667 (1991).	
AV		Przybycien et al. "Electrochemical separation utilizing metalloporphyrins and metallophthalocyanines", 1998, Chem Abstract 128: 162418.	

Examiner Signature		Date Considered	5/24/95
--------------------	--	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450